



Florissant Fossil Beds National Monument



We are pleased to announce the second year of our association with Adams State College, Division of Extended Studies, in Alamosa Colorado, through which we will offer graduate credit for teachers attending our seminar series. We present geology, biology, history and humanities courses that will allow teachers to earn $\frac{1}{2}$ credit per 7.5-hour class, and 1 full credit for the single, two-day class being offered. Each $\frac{1}{2}$ graduate credit is \$20.00 and a full credit is \$35.00. BOCES is \$15.00 per $\frac{1}{2}$ credit.



FLORISSANT SEMINAR SERIES 2002

The Florissant Seminar Series is based on the idea that experiencing nature and the outdoors is a fantastic way to learn and have fun. A variety of daylong classes are offered in the exciting classroom of the Florissant Valley and Pikes Peak region. The instructors are experts in their fields. Classes are small and costs are low to ensure interaction and participation. The Friends of the Florissant Fossil Beds sponsor the series and all proceeds help the National Park Service protect the world-class fossils and educate the public about their significance. We hope you will be excited by the offerings this year and join in inspired learning and fun.

REGISTERING FOR THE SEMINARS

Seminars fill up quickly, so we recommend registering early. Regular fees for each seminar are \$30.00 per person and \$25.00 for members of the Friends of the Florissant Fossil Beds. Please complete the registration form provided and return it with full payment. If you are a teacher taking classes for graduate credits, call the Monument for a packet which will include syllabus, course objectives and other essential information. At the time of registration, Adams State College tuition **must** be included. Please make checks payable to Friends of the Florissant Fossil Beds.

REFUND/CANCELLATION POLICY

The Monument reserves the right to cancel any seminar for insufficient enrollment, and will make every effort to place the participants in another seminar of their choice or will return "Friends" seminar registration fees. If you cancel your enrollment for any reason, the following policy will apply: refunds will be given for cancellations received up to one week before the seminar, minus a \$5.00 processing fee; no refunds are given for cancellations less than a week before the seminar.

ABOUT THE SEMINARS

All seminars begin at the Fowler Education Center at 9:00 a.m. and end at 5:00 p.m. unless otherwise noted. Allow approximately one-hour driving time from Colorado Springs, two hours from Denver. Most seminars will be outdoors for a portion of the class, and may require hiking. Please be prepared for the changeable mountain weather with layered clothing, rain gear, hiking shoes, hat, sunglasses and sunscreen. Meals are not provided, so bring a sack lunch, snacks, and drinking water.

SEMINARS

PALEONTOLOGY AND GEOLOGIC HISTORY OF FLORISSANT (1/2 credit) June 8, 9:00 AM to 5:00 PM, Herb Meyer, PhD -- From the one billion year old Pikes Peak Granite to the glacial deposits of 10 - 20,000 years ago, the Florissant area preserves diverse episodes in earth's history. Foremost among these is the late Eocene formation of the Florissant Fossil Beds. Lab and lecture sessions, combined with a field trip to excavation sites, will cover topics such as rock formation, dating, fossil types, and methods for reconstructing ancient environments.

FOSSIL MOLDS (1/2 credit) June 15 and 16, 9:00 AM to 5:00 PM, Betty Merchant, MA -- This class will cover the casting, molding and painting techniques of fossils, plus basic fossil identification. Participants will keep the molds they complete. This class is especially designed for teachers, and the process learned to make molds and casts can be used in many aspects of education. This class is often taught through the Colorado School of Mines. All required materials will be supplied.



NATURAL HISTORY OF THE FLORISSANT VALLEY (1/2 credit) June 22, 9:00 AM to 5:00 PM, Richard Beidleman, PhD, and Linda Beidleman, MA -- On a leisurely all-day field trip afoot, the diversity of the Florissant valley will be explored. Dick and Linda Beidleman will discuss such topics as the area's geology and climate, the past and present ecosystems, local flora and fauna, and human history. Stories about the early naturalists who discovered the plants and animals of the frontier West will also be shared. Suggested equipment list includes: bird field guide, binoculars, 10x-hand lens, field notebook and pencil/pen.

DISCOVERING THE SECRETS OF COLORADO WILDFLOWERS (1/2 credit) June 29, 9:00 AM to 5:00 PM, Leigh Robertson, BS -- Join Leigh Robertson on a stroll through the high country of Florissant Fossil Beds and learn more about the variety of colorful wildflowers found there. If you've always wanted to know the names and stories of Colorado wildflowers, this is the seminar for you. Participants will learn interesting facts about flowers, discover edible plants, medicinal plants, and the stories behind wildflowers' names. We will learn how to use different kinds of wildflower books and keys. Wildflowers vary from year to year, so be prepared for a day of discovery.

WILD EDIBLE & USEFUL PLANTS (1/2 credit) July 7, 9:00 AM to 5:00 PM, "Cattail" Bob Seebeck -- Join author and noted authority "Cattail" Bob as we identify and sample dozens of the best-tasting wild plants of the Rockies. Medicinal and poisonous herbs will also be covered. Emphasis will be on field identification, eco-harvesting, and taste sampling. Field sites have been chosen for their great diversity in flora. Wild onion, amaranth, mint, mustard, tomatillo, catnip, chokecherry, currant, death camas, and poison hemlock are just a few selections. Students should provide inclement weather gear, lunch, and transportation.



SEXUAL LIFE OF FLOWERS (1/2 credit) July 13, 9:00 AM to 5:00 PM, Alexandra Vargo, PhD -- Using flowers as the focal point, Dr. Vargo will introduce participants to the fascinating world of pollination ecology. Flower's shapes, colors, patterns and aging will be observed in the field to determine how they "trick" and guide pollinators into cross-pollinating and avoid self-pollination. The community of flowers and pollinators will be evaluated to determine which are generalists and which are specialists. Co-evolution between the flowers and pollinators will be emphasized, determining how flowers evolve to attract butterflies, moths, bees, flies, beetles or birds. Floral and pollinator evolution will also be discussed.



OUTDOOR PHOTOGRAPHY WORKSHOP (1/2 credit) July 20, 9:00 AM to 5:00 PM, Paul Homan, EdD, and Bill Tyree, BS -- This seminar will assist the casual photographer in improving their skills in the world of outdoor photography. Instructors Paul Homan and Bill Tyree team up for lively discussions of cameras, lenses, and associated equipment as well as composition and effective use of light. Slides will be utilized to illustrate technique and composition. Field activities include practice in both scenic and close-up photography as the class wanders afield. Bring a camera and at least one roll of film.

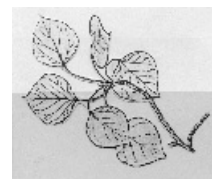
FIRE AND WATER: Volcanism and Ancient Lake Florissant (1/2 credit) July 27, 9:00 AM to 5:00 PM, Bud Wobus, PhD -- Several periods of volcanic activity of vastly different styles are recorded by rocks 36 to 28 million years old in and near Florissant Fossil Beds National Monument. Lava, ash, and mudflows from the Guffey volcanic center figure most closely in the creation and demise of "Lake Florissant." Most of this field trip will focus on the volcanics from Guffey, comparing them with those that formed the area's Wall Mountain Tuff and the younger volcanics at Cripple Creek. Course covers aspects of physical and historical geology and will provide some of the "flavor" of our science.

GEOLOGY AND HISTORY OF THE CRIPPLE CREEK MINING DISTRICT (1/2 credit) August 3, 9:00 AM to 5:00 PM, Steven Veatch, MS -- The day will begin as we step back 100 years and descend 1,000 feet in a vertical mine shaft at the Mollie Kathleen Gold Mine. Next we will tour the Cripple Creek Museum, a window on Cripple Creek gold rush history and some of the social issues of the time. Be prepared for an invigorating hike and lively discussions as we explore the District's Vindicator Valley. Bring your camera and plenty of film for memorable pictures of historic structures and mines that remain in this scenic area. After lunch, the class will visit the Cresson surface mine to investigate the District's geology and learn about mining, ore-processing, and environmental responsibility. This program is conducted in the field, and participants must be able to do an easy hike with a moderate elevation gain. Wear sturdy shoes and long pants to the mine. Please, no children for this program. Due to active mining operations being conducted at the field site, the class is limited to 11 participants. There will be an additional fee of \$13.00 for the Mollie Kathleen Gold Mine tour and another \$4.00 for admission to the museum.



GEOLOGY OF THE FRONT RANGE (1/2 credit) August 11, 9:00 AM to 5:00 PM, Peter J. (Pete) Modreski, PhD -- This will be a field trip to see and examine geologic highlights of the Front Range area, focusing on the Colorado Springs area. We'll meet at the Garden of the Gods Visitor's Center in Colorado Springs and finish up in Manitou Springs. Our tour will include (close-up or from a distance) Garden of the Gods, the Pikes Peak granite, the Rampart Range, and the sedimentary rocks that are the record of the uplift and erosion of two mountain ranges and the quiet periods in between. We'll even explore some things about water and the role it has played in the mountains' history. Bring a lunch, water, camera, hand lens, and (for some stops) a collecting sack and rock hammer if you have one.

WESTERN WRITER-NATURALISTS: Wisdom from Wild Places (1/2 credit) August 31, 9:00 AM to 5:00 PM, John Stansfield -- Just as natural processes shape the remarkable Western landscape, so writer-naturalists deeply impact human relationships with the land, plants, and other animals. The lives, works, and conservation legacy of Western writer-naturalists encourage students of any age to delve into the subjects of nature's classroom. This seminar focuses on the outdoor experiences of John Muir, Margaret Murie, and Enos Mills, especially those from their childhood and young adult years. Other writer-naturalists from Western North America will also be highlighted. Teachers, parents, intermediate and secondary students, and anyone interested in Western nature writing will find topics of interest in this seminar. Educational handouts will be provided.



ASPEN: Cycles of Change (1/2 credit) September 14, 9:00 AM to 5:00 PM, Wayne Shepperd, PhD--

Aspen should be at the height of their color as this one-day workshop examines the tree species that has become a symbol of the Rocky Mountains and Colorado. We will begin with an indoor presentation and lecture on the ecology and growth of aspen and then move outside to see first-hand how aspen is uniquely adapted to thrive under natural disturbance regimes. Participants will observe aspen's clonal growth characteristics, understand how aspen reproduces, learn about diseases and damaging agents that affect aspen's health and vigor, and recognize how aspen co-exists with other vegetation over time.

INSTRUCTORS

LINDA BEIDLEMAN, MA, did her Masters work at Rice University. She is co-author of *Plants of the San Francisco Bay Region*, *Plants of Rocky Mountain National Park*, and the *Annotated Bibliography of Colorado Vertebrate Zoology*. Linda has worked with the California Native Plant Society and taught bird and/or botany short courses at Aspen Center for Environmental Studies, Colorado College, the University of California, Berkeley, as well as Rocky Mountain National Park. With Dr. Beidleman she has co-authored a number of winter bird-population studies.

RICHARD BEIDLEMAN, PhD, is an ecologist with a doctorate from the University of Colorado and has taught on the faculty at CSU, University of Colorado, and Colorado College, where he is now Professor Emeritus (Biology). He is currently a Research Associate at the University of California Herbarium (Berkeley) and an instructor of field courses at University of California, Aspen Center for Environmental Studies, and Rocky Mountain National Park. Dr. Beidleman has authored numerous publications including many on ecology, zoology, and American frontier naturalists, as well as co-authored *Plants of Rocky Mountain National Park* and the *Annotated Bibliography of Colorado Vertebrate Zoology*.

PAUL HOMAN, EdD, is a writer and photographer who has found that retirement provides the opportunity to use his skills in these fields to complement his enthusiasm for nature. Since retirement, he has taught classes, authored a monthly outdoor column for over five years, and sold his own photos to a variety of markets.

BETTY MERCHANT, MA, is a retired teacher with a degree in Geology and an interest in volcanology. She has been teaching Casting and Molding of Fossils for the past four years, particularly for the Colorado School of Mines. Merchant's seminar is specifically designed for the professional teacher.

HERB MEYER, PhD, is the on-staff paleontologist at Florissant Fossil Beds. He has taught paleontology and geology at the University of California at Berkeley, directed and instructed Elderhostel field programs in Oregon, and has been a researcher for the Florida Museum of Natural History. His research interests are in paleobotany and paleoclimatology.

PETE MODRESKI, PhD, is responsible for Geologic Outreach and Education with the U.S. Geological Survey, Denver, CO. He has taught Continuing Education classes on geology, dinosaurs, and rocks and minerals for the Colorado School of Mines, and is a volunteer for the Friends of Dinosaur Ridge and the Denver Museum of Nature and Science. Pete is a co-author of *Minerals of Colorado*, published in 1997.

LEIGH ROBERTSON, BS, is the author of the Falcon guidebook *Southern Rocky Mountain Wildflowers*. She has a degree in Natural Resources from Ohio State University. Leigh has worked as a park naturalist for the U.S. Forest Service, The Nature Conservancy and El Paso County Parks. Most recently, Leigh was the Interpretive Program Supervisor for the City of Colorado Springs at Garden of the Gods Park and on Pikes Peak. She currently works as a researcher and writer.

“CATTAIL” BOB SEEBECK has been conducting outdoor education classes in the Rockies since 1975. His diverse background includes training and experience in botany, photography, survival, emergency services, backcountry guiding, and mountain gardening. Bob has been employed by many survival schools including a 3-year term as assistant director of Survival Unlimited. He has also made appearances on the TODAY SHOW and in local media. He is the director of the Self-Reliance Institute, offering instruction in wilderness survival, wild edible plants, and self-reliance topics.

WAYNE D. SHEPPERD, PhD, is a Research Silviculturist, at the U.S. Forest Service Rocky Mountain Research Station in Fort Collins, Colorado. He is also administrator of the Manitou Experimental Forest, near Woodland Park, Colorado. He holds a BS in Outdoor Recreation, and MS and Ph.D. degrees in Silviculture from Colorado State University. A Colorado native, Dr. Shepperd has been with the Forest Service since 1969. The author of over 70 research publications, he is a recognized expert on the ecology, growth, and management of Rocky Mountain Forests. His current research includes fire, fuels, vegetation, and management studies in the Colorado Front Range, North Kaibab Plateau in Arizona, and the Black Hills of South Dakota.

JOHN STANSFIELD MA, is a storyteller and writer who began exploring the North American West and its nature literature as a boy in 1960 and has never stopped. He loves hiking and skiing the West and telling stories about its diverse lands, wildlife, and people—especially to children and young adults. With the desire to bring people together to share the lore of the region, Stansfield founded the Rocky Mountain Storytelling Festival in 1989. A former elementary school teacher, he teaches storytelling and other subjects on the adjunct faculty of the University of Colorado—Colorado Springs. He has a BA in English from Holy Cross College in Wooster, Massachusetts, and an MA in Teaching from Emory University in Atlanta, Georgia. Stansfield is the author of *Writers of the American West: Multicultural Learning Encounters*, published by Teacher Ideas Press.

WILLIAM TYREE, BS, received his degree from Colorado College. He has taught at the Colorado School of Mines and was employed as a physicist and engineer prior to his retirement. He is a wood carver specializing in large pieces, and uses photography in a variety of applications. He became interested in low light photography while involved with the Colorado Division of Wildlife Bats/Inactive Mines project. He has designed and built specialized ultrasonic detectors for bat research, and video camera systems for photographing wildlife.

ALEXANDRA VARGO, PhD, received her doctorate in zoology at Iowa State University and is a professor in the biology department of Colorado College. She has regularly taught entomology, animal behavior, field zoology, vertebrate zoology, invertebrate zoology, and ecology. She has been an instructor in international venues, as well as for the National Audubon Society and various other organizations. She is currently authoring a book on her twenty-one summers of research and reflections in Torrey Valley, Dubois, Wyoming.

STEVEN VEATCH, MS, conducts geoscience seminars for the Florissant Fossil Beds National Monument and the Cripple Creek Park and Recreation Department. He received his BS from the University of Southern Colorado and an MA from Webster University, St. Louis. He also received an MS in Earth Science from Emporia State University. Steve's special interests include geologic processes operating at the surface, paleontology, and Colorado archaeology. Steve is a member of the Colorado Springs Mineralogical Society, Colorado Scientific Society, Colorado Archaeological Society, Western Interior Paleontological Society, the National Association of Geoscience Teachers, and the Geological Society of America.

REINHARD A. (Bud) WOBUS, PhD, has taught Geology at Williams College, Massachusetts, for 35 years, serving as Department Chairman for some 8 years. During that time and much more, he has mapped and studied the igneous and metamorphic geology of the Rockies' Southern Front Range, much of the time as an employee of the U.S. Geological Survey. He has produced numerous journal articles and maps on the local geology, including the geologic map of the Florissant Quadrangle.

Friends of the Florissant Fossil Beds, Inc.

Florissant Fossil Beds National Monument

Sponsors of the Impressions Newspaper



Saving the Past...

...for the Future

Join us in supporting Florissant Fossil Beds National Monument
AND RECEIVE A DISCOUNT ON YOUR SEMINARS!

MEMBERSHIP CATEGORIES

Individual	\$ 15.00
Individual (2 Year)	27.00
Family	25.00
Family (2 Year)	40.00
Corp/Business	100.00
Lifetime (Old Fossil)	300.00
Contribution	_____
Total	_____

We support:

Environmental Education Programs
Field Seminars
Interpretive Programs
Paleontological Resources
Natural and Cultural Resources
Traveling Exhibits
Publications

Mail the completed forms with payment to:

Friends of the Florissant Fossil Beds,
P.O. Box 1074, Divide,
Colorado 80814

Name _____

Street _____

City _____ State _____ Zip _____

Phone _____

The fees for each Seminar are \$30.00 per person; and \$25.00 per person for members of the Friends group.

Name _____ Phone _____ (H)

Address _____ Phone _____ (W)

City _____ State _____ Zip _____

REGISTRATION FORM FOR SEMINARS

Teacher graduate credits are \$20.00 for ½ credit (7.5 hour), and \$35.00 for 1 full credit (2-day, 1.5 hour class on Fossil Molds).

Course Number	Seminar Title	Adams State Tuition \$20.00/\$35.00	BOCES \$15.00	Total Amount this seminar
ED 589				
ED 589				
ED 589				
ED 589				
ED 589				
ED 589				
		Membership Dues		
		Subtotal		
		Total		

Florissant Fossil Beds National Monument
P.O.Box 185
Florissant, CO 80816
719-748-3253
www.nps.gov

BULK RATE
POSTAGE
PAID
National Park Service
Permit #G-83